

SEQUENCE LISTING

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<120> COMPOSITIONS AND METHODS FOR MODIFICATION AND PREVENTION OF SARS
CORONAVIRUS INFECTIVITY

<130> 6-04 WO

<140> PCT (not assigned)

<141> 2005-02-14

<150> US 60/544,410

<151> 2004-02-12

<160> 106

<170> PatentIn version 3.3

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<212> DNA

<213> SARS coronavirus Urbani

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 1010 1015 1020
 Phe Cys Gly Lys Gly Tyr His Leu Met Ser Phe Pro Gln Ala Ala
 1025 1030 1035
 Pro His Gly Val Val Phe Leu His Val Thr Tyr Val Pro Ser Gln
 Page 9

1040	1045	1050
Glu Arg Asn Phe Thr Thr 1055	Ala Pro Ala Ile Cys 1060	His Glu Gly Lys 1065
Ala Tyr Phe Pro Arg Glu 1070	Gly Val Phe Val Phe 1075	Asn Gly Thr Ser 1080
Trp Phe Ile Thr Gln Arg 1085	Asn Phe Phe Ser Pro 1090	Gln Ile Ile Thr 1095
Thr Asp Asn Thr Phe Val 1100	Ser Gly Asn Cys Asp 1105	Val Val Ile Gly 1110
Ile Ile Asn Asn Thr Val 1115	Tyr Asp Pro Leu Gln 1120	Pro Glu Leu Asp 1125
Ser Phe Lys Glu Glu Leu 1130	Asp Lys Tyr Phe Lys 1135	Asn His Thr Ser 1140
Pro Asp Val Asp Leu Gly 1145	Asp Ile Ser Gly Ile 1150	Asn Ala Ser Val 1155
Val Asn Ile Gln Lys Glu 1160	Ile Asp Arg Leu Asn 1165	Glu Val Ala Lys 1170
Asn Leu Asn Glu Ser Leu 1175	Ile Asp Leu Gln Glu 1180	Leu Gly Lys Tyr 1185
Glu Gln Tyr Ile Lys Trp 1190	Pro Trp Tyr Val Trp 1195	Leu Gly Phe Ile 1200
Ala Gly Leu Ile Ala Ile 1205	Val Met Val Thr Ile 1210	Leu Leu Cys Cys 1215
Met Thr Ser Cys Cys Ser 1220	Cys Leu Lys Gly Ala 1225	Cys Ser Cys Gly 1230
Ser Cys Cys Lys Phe Asp 1235	Glu Asp Asp Ser Glu 1240	Pro Val Leu Lys 1245
Gly Val Lys Leu His Tyr 1250	Thr 1255	

<210> 3
 <211> 390
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
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 <222> (1)..(390)

<400> 3
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 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
 1 5 10 15

ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac aag gcg att 96
 Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
 20 25 30

agt caa att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag 144
 Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
 35 40 45

ctg caa gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt 192
 Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
 50 55 60

aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat 240
 Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp
 65 70 75 80

atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta caa att gac agg 288
 Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg
 85 90 95

tta att aca ggc aga ctt caa agc ctt caa acc tat gta aca caa caa 336
 Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln
 100 105 110

cta atc agg gct gct gaa atc agg gct tct gct aat ctt gct gct act 384
 Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala Thr
 115 120 125

aaa atg 390
 Lys Met
 130

<210> 4
 <211> 130
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 4
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
 1 5 10 15

Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
 20 25 30

Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
 35 40 45

Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
 50 55 60

Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp
 65 70 75 80

Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg
 85 90 95

Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln
 100 105 110

Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala Thr
 115 120 125

Lys Met
 130

<210> 5
 <211> 276
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(276)

<400> 5
 atg caa atg gca tat agg ttc aat ggc att gga gtt acc caa aat gtt 48
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
 1 5 10 15
 ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac aag gcg att 96
 Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
 20 25 30
 agt caa att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag 144
 Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
 35 40 45
 ctg caa gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt 192
 Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
 50 55 60
 aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat 240
 Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp
 65 70 75 80
 atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta 276
 Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val
 85 90

<210> 6
 <211> 92
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 6
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
 1 5 10 15
 Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
 20 25 30
 ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
 35 40 45
 Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
 50 55 60

Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp
 65 70 75 80

Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val
 85 90

<210> 7
 <211> 174
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(174)

<400> 7
 att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag ctg caa 48
 Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
 1 5 10 15
 gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt aaa caa 96
 Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
 20 25 30
 ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat atc ctt 144
 Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu
 35 40 45
 tcg cga ctt gat aaa gtc gag gcg gag gta 174
 Ser Arg Leu Asp Lys Val Glu Ala Glu Val
 50 55

<210> 8
 <211> 58
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 8
 Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
 1 5 10 15
 Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
 20 25 30
 Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu
 35 40 45
 Ser Arg Leu Asp Lys Val Glu Ala Glu Val
 50 55

<210> 9
 <211> 141
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS

<222> (1)..(141)

<400> 9

ttg ggc aag ctg caa gac gtt gtt aac cag aat gct caa gca tta aac	48
Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn	
1 5 10 15	

aca ctt gtt aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg	96
Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val	
20 25 30	

cta aat gat atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta	141
Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val	
35 40 45	

<210> 10

<211> 47

<212> PRT

<213> SARS coronavirus Urbani

<400> 10

Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn
1 5 10 15

Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val
20 25 30

Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val
35 40 45

<210> 11

<211> 114

<212> DNA

<213> SARS coronavirus Urbani

<220>

<221> CDS

<222> (1)..(114)

<400> 11

caa att gac agg tta att aca ggc aga ctt caa agc ctt caa acc tat	48
Gln Ile Asp Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr	
1 5 10 15	

gta aca caa caa cta atc agg gct gct gaa atc agg gct tct gct aat	96
Val Thr Gln Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn	
20 25 30	

ctt gct gct act aaa atg	114
Leu Ala Ala Thr Lys Met	
35	

<210> 12

<211> 38

<212> PRT

<213> SARS coronavirus Urbani

<400> 12

Gln Ile Asp Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr
1 5 10 15

Val Thr Gln Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn
 20 25 30

Leu Ala Ala Thr Lys Met
 35

<210> 13
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 13
 atg caa atg gca tat agg ttc aat ggc att gga gtt acc caa aat gtt 48
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
 1 5 10 15
 ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac aag gcg att 96
 Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
 20 25 30
 agt caa att 105
 Ser Gln Ile
 35

<210> 14
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 14
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
 1 5 10 15
 Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
 20 25 30
 Ser Gln Ile
 35

<210> 15
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 15
 ttc aat ggc att gga gtt acc caa aat gtt ctc tat gag aac caa aaa 48
 Phe Asn Gly Ile Gly Val Thr Gln Asn Val Leu Tyr Glu Asn Gln Lys
 1 5 10 15
 caa atc gcc aac caa ttt aac aag gcg att agt caa att caa gaa tca 96
 Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser
 Page 15

20 25 30 105
 ctt aca aca
 Leu Thr Thr
 35

 <210> 16
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

 <400> 16
 Phe Asn Gly Ile Gly Val Thr Gln Asn Val Leu Tyr Glu Asn Gln Lys
 1 5 10 15

 Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser
 20 25 30

 Leu Thr Thr
 35

 <210> 17
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

 <220>
 <221> CDS
 <222> (1)..(105)

 <400> 17
 caa aat gtt ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac 48
 Gln Asn Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn
 1 5 10 15

 aag gcg att agt caa att caa gaa tca ctt aca aca aca tca act gca 96
 Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala
 20 25 30

 ttg ggc aag 105
 Leu Gly Lys
 35

 <210> 18
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

 <400> 18
 Gln Asn Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn
 1 5 10 15

 Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala
 20 25 30

 Leu Gly Lys
 35

<210> 19
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 19
 caa aaa caa atc gcc aac caa ttt aac aag gcg att agt caa att caa 48
 Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln
 1 5 10 15
 gaa tca ctt aca aca aca tca act gca ttg ggc aag ctg caa gac gtt 96
 Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val
 20 25 30
 gtt aac cag 105
 Val Asn Gln
 35

<210> 20
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 20
 Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln
 1 5 10 15
 Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val
 20 25 30
 Val Asn Gln
 35

<210> 21
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 21
 ttt aac aag gcg att agt caa att caa gaa tca ctt aca aca aca tca 48
 Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser
 1 5 10 15
 act gca ttg ggc aag ctg caa gac gtt gtt aac cag aat gct caa gca 96
 Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala
 20 25 30
 tta aac aca 105
 Leu Asn Thr
 35

<210> 22
 <211> 35

<212> PRT
 <213> SARS coronavirus Urbani

<400> 22

Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser
 1 5 10 15

Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala
 20 25 30

Leu Asn Thr
 35

<210> 23
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 23
 att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag ctg caa 48
 Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
 1 5 10 15

gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt aaa caa 96
 Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
 20 25 30

ctt agc tct 105
 Leu Ser Ser
 35

<210> 24
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 24

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
 1 5 10 15

Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
 20 25 30

Leu Ser Ser
 35

<210> 25
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 25
 aca tca act gca ttg ggc aag ctg caa gac gtt gtt aac cag aat gct 48
 Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala
 1 5 10 15
 caa gca tta aac aca ctt gtt aaa caa ctt agc tct aat ttt ggt gca 96
 Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly Ala
 20 25 30
 att tca agt 105
 Ile Ser Ser
 35

<210> 26
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 26
 Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala
 1 5 10 15
 Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly Ala
 20 25 30
 Ile Ser Ser
 35

<210> 27
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 27
 caa gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt aaa 48
 Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys
 1 5 10 15
 caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat atc 96
 Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile
 20 25 30
 ctt tcg cga 105
 Leu Ser Arg
 35

<210> 28
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 28
 Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys
 1 5 10 15

Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile
 20 25 30

Leu Ser Arg
 35

<210> 29
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 29
 gct caa gca tta aac aca ctt gtt aaa caa ctt agc tct aat ttt ggt 48
 Ala Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly
 1 5 10 15
 gca att tca agt gtg cta aat gat atc ctt tcg cga ctt gat aaa gtc 96
 Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val
 20 25 30
 gag gcg gag 105
 Glu Ala Glu
 35

<210> 30
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 30

Ala Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly
 1 5 10 15

Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val
 20 25 30

Glu Ala Glu
 35

<210> 31
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 31
 gtt aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat 48
 Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn
 1 5 10 15
 gat atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta caa att gac 96
 Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp
 20 25 30

agg tta att
Arg Leu Ile 105
35

<210> 32
<211> 35
<212> PRT
<213> SARS coronavirus Urbani

<400> 32

Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn
1 5 10 15

Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp
20 25 30

Arg Leu Ile
35

<210> 33
<211> 105
<212> DNA
<213> SARS coronavirus Urbani

<220>
<221> CDS
<222> (1)..(105)

<400> 33
ttt ggt gca att tca agt gtg cta aat gat atc ctt tcg cga ctt gat 48
Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp
1 5 10 15

aaa gtc gag gcg gag gta caa att gac agg tta att aca ggc aga ctt 96
Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly Arg Leu
20 25 30

caa agc ctt 105
Gln Ser Leu
35

<210> 34
<211> 35
<212> PRT
<213> SARS coronavirus Urbani

<400> 34

Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp
1 5 10 15

Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly Arg Leu
20 25 30

Gln Ser Leu
35

<210> 35

<211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
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 <222> (1)..(105)

<400> 35
 cta aat gat atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta caa 48
 Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln
 1 5 10 15
 att gac agg tta att aca ggc aga ctt caa agc ctt caa acc tat gta 96
 Ile Asp Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val
 20 25 30
 aca caa caa 105
 Thr Gln Gln
 35

<210> 36
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 36
 Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln
 1 5 10 15
 ile Asp Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val
 20 25 30
 Thr Gln Gln
 35

<210> 37
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 37
 ctt gat aaa gtc gag gcg gag gta caa att gac agg tta att aca ggc 48
 Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly
 1 5 10 15
 aga ctt caa agc ctt caa acc tat gta aca caa caa cta atc agg gct 96
 Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln Leu Ile Arg Ala
 20 25 30
 gct gaa atc 105
 Ala Glu Ile
 35

<210> 38
 <211> 35
 <212> PRT

<213> SARS coronavirus Urbani

<400> 38

Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly
 1 5 10 15

Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln Leu Ile Arg Ala
 20 25 30

Ala Glu Ile
 35

<210> 39

<211> 123

<212> DNA

<213> SARS coronavirus Urbani

<220>

<221> CDS

<222> (1)..(123)

<400> 39

gat gtt gat ctt ggc gac att tca ggc att aac gct tct gtc gtc aac 48
 Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn
 1 5 10 15

att caa aaa gaa att gac cgc ctc aat gag gtc gct aaa aat tta aat 96
 Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn
 20 25 30

gaa tca ctc att gac ctt caa gaa ttg 123
 Glu Ser Leu Ile Asp Leu Gln Glu Leu
 35 40

<210> 40

<211> 41

<212> PRT

<213> SARS coronavirus Urbani

<400> 40

Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn
 1 5 10 15

Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn
 20 25 30

Glu Ser Leu Ile Asp Leu Gln Glu Leu
 35 40

<210> 41

<211> 63

<212> DNA

<213> SARS coronavirus Urbani

<220>

<221> CDS

<222> (1)..(63)

<400> 41
 att gac cgc ctc aat gag gtc gct aaa aat tta aat gaa tca ctc att 48
 Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile
 1 5 10 15

gac ctt caa gaa ttg 63
 Asp Leu Gln Glu Leu
 20

<210> 42
 <211> 21
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 42
 Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile
 1 5 10 15
 Asp Leu Gln Glu Leu
 20

<210> 43
 <211> 84
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(84)

<400> 43
 gtc gtc aac att caa aaa gaa att gac cgc ctc aat gag gtc gct aaa 48
 Val Val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys
 1 5 10 15
 aat tta aat gaa tca ctc att gac ctt caa gaa ttg 84
 Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu
 20 25

<210> 44
 <211> 28
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 44
 val val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu val Ala Lys
 1 5 10 15
 Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu
 20 25

<210> 45
 <211> 105
 <212> DNA
 <213> SARS coronavirus Urbani

<220>
 <221> CDS
 <222> (1)..(105)

<400> 45
 att tca ggc att aac gct tct gtc gtc aac att caa aaa gaa att gac 48
 ile ser gly ile asn ala ser val val asn ile gln lys glu ile asp
 1 5 10 15
 cgc ctc aat gag gtc gct aaa aat tta aat gaa tca ctc att gac ctt 96
 arg leu asn glu val ala lys asn leu asn glu ser leu ile asp leu
 20 25 30
 caa gaa ttg 105
 gln glu leu
 35

<210> 46
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 46
 ile ser gly ile asn ala ser val val asn ile gln lys glu ile asp
 1 5 10 15
 arg leu asn glu val ala lys asn leu asn glu ser leu ile asp leu
 20 25 30
 gln glu leu
 35

<210> 47
 <211> 49
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 47
 gln lys gln ile ala asn gln phe asn lys ala ile ser gln ile gln
 1 5 10 15
 glu ser leu thr thr thr ser thr ala leu gly lys leu gln asp val
 20 25 30
 val asn gln asn ala gln ala leu asn thr leu val lys gln leu ser
 35 40 45

Ser

<210> 48
 <211> 36
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 48
 asp ile ser gly ile asn ala ser val val asn ile gln lys glu ile
 1 5 10 15

asp arg leu asn glu val ala lys asn leu asn glu ser leu ile asp
 Page 25

20

25

30

Leu Gln Glu Leu
35

<210> 49
<211> 1255
<212> PRT
<213> SARS coronavirus Urbani

<400> 49

Met Phe Ile Phe Leu Leu Phe Leu Thr Leu Thr Ser Gly Ser Asp Leu
1 5 10 15

Asp Arg Cys Thr Thr Phe Asp Asp Val Gln Ala Pro Asn Tyr Thr Gln
20 25 30

His Thr Ser Ser Met Arg Gly Val Tyr Tyr Pro Asp Glu Ile Phe Arg
35 40 45

Ser Asp Thr Leu Tyr Leu Thr Gln Asp Leu Phe Leu Pro Phe Tyr Ser
50 55 60

Asn Val Thr Gly Phe His Thr Ile Asn His Thr Phe Gly Asn Pro Val
65 70 75 80

Ile Pro Phe Lys Asp Gly Ile Tyr Phe Ala Ala Thr Glu Lys Ser Asn
85 90 95

Val Val Arg Gly Trp Val Phe Gly Ser Thr Met Asn Asn Lys Ser Gln
100 105 110

Ser Val Ile Ile Ile Asn Asn Ser Thr Asn Val Val Ile Arg Ala Cys
115 120 125

Asn Phe Glu Leu Cys Asp Asn Pro Phe Phe Ala Val Ser Lys Pro Met
130 135 140

Gly Thr Gln Thr His Thr Met Ile Phe Asp Asn Ala Phe Asn Cys Thr
145 150 155 160

Phe Glu Tyr Ile Ser Asp Ala Phe Ser Leu Asp Val Ser Glu Lys Ser
165 170 175

Gly Asn Phe Lys His Leu Arg Glu Phe Val Phe Lys Asn Lys Asp Gly
180 185 190

Phe Leu Tyr Val Tyr Lys Gly Tyr Gln Pro Ile Asp Val Val Arg Asp
195 200 205

Leu Pro Ser Gly Phe Asn Thr Leu Lys Pro Ile Phe Lys Leu Pro Leu
210 215 220

Gly Ile Asn Ile Thr Asn Phe Arg Ala Ile Leu Thr Ala Phe Ser Pro
 225 230 235 240
 Ala Gln Asp Ile Trp Gly Thr Ser Ala Ala Tyr Phe Val Gly Tyr
 245 250 255
 Leu Lys Pro Thr Thr Phe Met Leu Lys Tyr Asp Glu Asn Gly Thr Ile
 260 265 270
 Thr Asp Ala Val Asp Cys Ser Gln Asn Pro Leu Ala Glu Leu Lys Cys
 275 280 285
 Ser Val Lys Ser Phe Glu Ile Asp Lys Gly Ile Tyr Gln Thr Ser Asn
 290 295 300
 Phe Arg Val Val Pro Ser Gly Asp Val Val Arg Phe Pro Asn Ile Thr
 305 310 315 320
 Asn Leu Cys Pro Phe Gly Glu Val Phe Asn Ala Thr Lys Phe Pro Ser
 325 330 335
 Val Tyr Ala Trp Glu Arg Lys Lys Ile Ser Asn Cys Val Ala Asp Tyr
 340 345 350
 Ser Val Leu Tyr Asn Ser Thr Phe Phe Ser Thr Phe Lys Cys Tyr Gly
 355 360 365
 Val Ser Ala Thr Lys Leu Asn Asp Leu Cys Phe Ser Asn Val Tyr Ala
 370 375 380
 Asp Ser Phe Val Val Lys Gly Asp Asp Val Arg Gln Ile Ala Pro Gly
 385 390 395 400
 Gln Thr Gly Val Ile Ala Asp Tyr Asn Tyr Lys Leu Pro Asp Asp Phe
 405 410 415
 Met Gly Cys Val Leu Ala Trp Asn Thr Arg Asn Ile Asp Ala Thr Ser
 420 425 430
 Thr Gly Asn Tyr Asn Tyr Lys Tyr Arg Tyr Leu Arg His Gly Lys Leu
 435 440 445
 Arg Pro Phe Glu Arg Asp Ile Ser Asn Val Pro Phe Ser Pro Asp Gly
 450 455 460
 Lys Pro Cys Thr Pro Pro Ala Leu Asn Cys Tyr Trp Pro Leu Asn Asp
 465 470 475 480
 Tyr Gly Phe Tyr Thr Thr Gly Ile Gly Tyr Gln Pro Tyr Arg Val
 485 490 495

Val Val Leu Ser Phe Glu Leu Leu Asn Ala Pro Ala Thr Val Cys Gly
 500 505 510
 Pro Lys Leu Ser Thr Asp Leu Ile Lys Asn Gln Cys Val Asn Phe Asn
 515 520 525
 Phe Asn Gly Leu Thr Gly Thr Gly Val Leu Thr Pro Ser Ser Lys Arg
 530 535 540
 Phe Gln Pro Phe Gln Gln Phe Gly Arg Asp Val Ser Asp Phe Thr Asp
 545 550 555 560
 Ser Val Arg Asp Pro Lys Thr Ser Glu Ile Leu Asp Ile Ser Pro Cys
 565 570 575
 Ser Phe Gly Gly Val Ser Val Ile Thr Pro Gly Thr Asn Ala Ser Ser
 580 585 590
 Glu Val Ala Val Leu Tyr Gln Asp Val Asn Cys Thr Asp Val Ser Thr
 595 600 605
 Ala Ile His Ala Asp Gln Leu Thr Pro Ala Trp Arg Ile Tyr Ser Thr
 610 615 620
 Gly Asn Asn Val Phe Gln Thr Gln Ala Gly Cys Leu Ile Gly Ala Glu
 625 630 635 640
 His Val Asp Thr Ser Tyr Glu Cys Asp Ile Pro Ile Gly Ala Gly Ile
 645 650 655
 Cys Ala Ser Tyr His Thr Val Ser Leu Leu Arg Ser Thr Ser Gln Lys
 660 665 670
 Ser Ile Val Ala Tyr Thr Met Ser Leu Gly Ala Asp Ser Ser Ile Ala
 675 680 685
 Tyr Ser Asn Asn Thr Ile Ala Ile Pro Thr Asn Phe Ser Ile Ser Ile
 690 695 700
 Thr Thr Glu Val Met Pro Val Ser Met Ala Lys Thr Ser Val Asp Cys
 705 710 715 720
 Asn Met Tyr Ile Cys Gly Asp Ser Thr Glu Cys Ala Asn Leu Leu Leu
 725 730 735
 Gln Tyr Gly Ser Phe Cys Thr Gln Leu Asn Arg Ala Leu Ser Gly Ile
 740 745 750
 Ala Ala Glu Gln Asp Arg Asn Thr Arg Glu Val Phe Ala Gln Val Lys
 755 760 765
 Gln Met Tyr Lys Thr Pro Thr Leu Lys Tyr Phe Gly Gly Phe Asn Phe
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770 775 780
 Ser Gln Ile Leu Pro Asp Pro Leu Lys Pro Thr Lys Arg Ser Phe Ile
 785 790 795 800
 Glu Asp Leu Leu Phe Asn Lys Val Thr Leu Ala Asp Ala Gly Phe Met
 805 810 815
 Lys Gln Tyr Gly Glu Cys Leu Gly Asp Ile Asn Ala Arg Asp Leu Ile
 820 825 830
 Cys Ala Gln Lys Phe Asn Gly Leu Thr Val Leu Pro Pro Leu Leu Thr
 835 840 845
 Asp Asp Met Ile Ala Ala Tyr Thr Ala Ala Leu Val Ser Gly Thr Ala
 850 855 860
 Thr Ala Gly Trp Thr Phe Gly Ala Gly Ala Ala Leu Gln Ile Pro Phe
 865 870 875 880
 Ala Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn
 885 890 895
 Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala
 900 905 910
 Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly
 915 920 925
 Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu
 930 935 940
 Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn
 945 950 955 960
 Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp
 965 970 975
 Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln
 980 985 990
 Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala
 995 1000 1005
 Thr Lys Met Ser Glu Cys Val Leu Gly Gln Ser Lys Arg Val Asp
 1010 1015 1020
 Phe Cys Gly Lys Gly Tyr His Leu Met Ser Phe Pro Gln Ala Ala
 1025 1030 1035
 Pro His Gly Val Val Phe Leu His Val Thr Tyr Val Pro Ser Gln
 1040 1045 1050

Glu Arg Asn Phe Thr Thr Ala Pro Ala Ile Cys His Glu Gly Lys
1055 1060 1065

Ala Tyr Phe Pro Arg Glu Gly Val Phe Val Phe Asn Gly Thr Ser
1070 1075 1080

Trp Phe Ile Thr Gln Arg Asn Phe Phe Ser Pro Gln Ile Ile Thr
1085 1090 1095

Thr Asp Asn Thr Phe Val Ser Gly Asn Cys Asp Val Val Ile Gly
1100 1105 1110

Ile Ile Asn Asn Thr Val Tyr Asp Pro Leu Gln Pro Glu Leu Asp
1115 1120 1125

Ser Phe Lys Glu Glu Leu Asp Lys Tyr Phe Lys Asn His Thr Ser
1130 1135 1140

Pro Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val
1145 1150 1155

Val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys
1160 1165 1170

Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu Gly Lys Tyr
1175 1180 1185

Glu Gln Tyr Ile Lys Trp Pro Trp Tyr Val Trp Leu Gly Phe Ile
1190 1195 1200

Ala Gly Leu Ile Ala Ile Val Met Val Thr Ile Leu Leu Cys Cys
1205 1210 1215

Met Thr Ser Cys Cys Ser Cys Leu Lys Gly Ala Cys Ser Cys Gly
1220 1225 1230

Ser Cys Cys Lys Phe Asp Glu Asp Asp Ser Glu Pro Val Leu Lys
1235 1240 1245

Gly Val Lys Leu His Tyr Thr
1250 1255

<210> 50
<211> 35
<212> PRT
<213> SARS coronavirus Urbani

<400> 50

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
1 5 10 15

Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
 20 25 30

Leu Ser Ser
 35

<210> 51
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<400> 51

Ile Gln Ala Ala Leu Thr Lys Thr Ser Ala Ala Leu Gly Lys Leu Gln
 1 5 10 15

Ala Ala Val Asn Arg Asn Ala Ala Ala Leu Asn Lys Leu Val Lys Ala
 20 25 30

Leu Ser Ser
 35

<210> 52
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<220>
 <221> MISC_FEATURE
 <222> (1)..(35)
 <223> X=aminoisobutyric acid

<400> 52

Ile Gln Glu Ser Leu Thr Xaa Thr Ser Thr Ala Leu Gly Lys Leu Gln
 1 5 10 15

Asp Val Val Asn Xaa Asn Ala Gln Ala Leu Asn Xaa Leu Val Lys Gln
 20 25 30

Leu Ser Ser
 35

<210> 53
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<220>
 <221> MISC_FEATURE

<222> (1)..(35)
 <223> x=dipropyl or dibutyl glycine

<400> 53

Ile Gln Glu Ser Leu Thr Xaa Thr Ser Thr Ala Leu Gly Lys Leu Gln
 1 5 10 15

Asp Val Val Asn Xaa Asn Ala Gln Ala Leu Asn Xaa Leu Val Lys Gln
 20 25 30

Leu Ser Ser
 35

<210> 54
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<220>
 <221> MISC_FEATURE
 <222> (17)..(21)
 <223> i,i+4 lactam bridge

<400> 54

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
 1 5 10 15

Glu Val Val Asn Lys Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
 20 25 30

Leu Ser Ser
 35

<210> 55
 <211> 35
 <212> PRT
 <213> Artificial

<220>
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<220>
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 <222> (7)..(11)
 <223> i, i+4 lactam bridge

<220>
 <221> MISC_FEATURE
 <222> (28)..(32)
 <223> i, i+4 lactam bridge

<400> 55

Ile Gln Glu Ser Leu Thr Glu Thr Ser Thr Lys Leu Gly Lys Leu Gln
 1 5 10 15

Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Glu Leu Val Lys Lys
 20 25 30

Leu Ser Ser
 35

<210> 56
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<220>
 <221> MISC_FEATURE
 <222> (14)..(21)
 <223> i, i+7 bridge

<400> 56

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Glu Leu Gln
 1 5 10 15

Asp Val Val Asn Glu Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
 20 25 30

Leu Ser Ser
 35

<210> 57
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<400> 57

Ile Ile Glu Ser Leu Thr Thr Thr Ile Thr Ala Leu Gly Lys Leu Ile
 1 5 10 15

Asp Val Leu Asn Gln Asn Ile Gln Ala Leu Asn Thr Leu Ile Lys Gln
 20 25 30

Leu Ser Ser
 35

<210> 58
 <211> 35
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 58

Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Asp
 1 5 10 15

Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu
 20 25 30

Gln Glu Leu
 35

<210> 59
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<400> 59

Ile Ala Ala Ile Asn Lys Ser Val Ala Ala Ile Gln Lys Glu Ile Ala
 1 5 10 15

Arg Leu Asn Glu Val Ala Lys Ala Leu Asn Ala Ser Leu Ile Arg Leu
 20 25 30

Gln Ala Leu
 35

<210> 60
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<220>
 <221> MISC_FEATURE
 <222> (1)..(35)
 <223> X=aminoisobutyric acid (Aib)

<400> 60

Ile Ser Gly Ile Asn Xaa Ser Val Val Asn Ile Gln Lys Glu Ile Asp
 1 5 10 15

Arg Leu Asn Xaa Val Ala Lys Asn Leu Asn Xaa Ser Leu Ile Asp Leu
 20 25 30

Gln Glu Leu
 35

<210> 61
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<220>

<221> MISC_FEATURE
 <222> (1)..(35)
 <223> X=dipropyl or dibutyl glycine
 <400> 61

Ile Ser Gly Ile Asn Xaa Ser Val Val Asn Ile Gln Lys Glu Ile Asp
 1 5 10 15

Arg Leu Asn Xaa Val Ala Lys Asn Leu Asn Xaa Ser Leu Ile Asp Leu
 20 25 30

Gln Glu Leu
 35

<210> 62
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic peptide

<220>
 <221> MISC_FEATURE
 <222> (16)..(20)
 <223> i,i+4 lactam bridge

<400> 62

Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Glu
 1 5 10 15

Arg Leu Asn Lys Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu
 20 25 30

Gln Glu Leu
 35

<210> 63
 <211> 35
 <212> PRT
 <213> Artificial

<220>
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<220>
 <221> MISC_FEATURE
 <222> (6)..(10)
 <223> i,i+4 lactam bridge

<220>
 <221> MISC_FEATURE
 <222> (27)..(31)
 <223> i,i+4 lactam bridge

<400> 63

Ile Ser Gly Ile Asn Glu Ser Val Val Lys Ile Gln Lys Glu Ile Asp
 1 5 10 15

Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Lys Leu
 20 25 30

Gln Glu Leu
 35

<210> 64
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<220>
 <221> MISC_FEATURE
 <222> (13)..(20)
 <223> i,i+7 bridge

<400> 64

Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Glu Glu Ile Asp
 1 5 10 15

Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu
 20 25 30

Gln Glu Leu
 35

<210> 65
 <211> 35
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<400> 65

Ile Ser Gly Ile Asn Ala Ser Ile Val Asn Ile Gln Lys Glu Ile Asp
 1 5 10 15

Arg Leu Asn Glu Val Ile Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu
 20 25 30

Gln Glu Leu
 35

<210> 66
 <211> 39
 <212> PRT
 <213> SARS coronavirus Urbani

<400> 66

Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln
 1 5 10 15

Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser
20 25 30

Leu Ile Asp Leu Gln Glu Leu
35

<210>	67
<211>	36
<212>	PRT
<213>	Artificial

<220>
<223> synthetic peptide

<400> 67

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1 5 10 15

Asp Arg Leu Asn Glu Val Ile Lys Asn Leu Asn Glu Ser Leu Ile Asp
20 25 30

Leu Gln Gln Leu
35

<210>	68
<211>	36
<212>	PRT
<213>	Artificial

<220>
<223> synthetic peptide

<400> 68

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1 5 10 15

Ala Arg Leu Asn Glu Val Ala Lys Ala Leu Asn Glu Ser Leu Ile Asp
20 25 30

Leu Gln Glu Leu
35

<210>	69
<211>	36
<212>	PRT
<213>	Artificial

<220>
<223> Synthetic peptide

<400> 69

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1 5 10 15

Ala Arg Leu Asn Glu Val Ile Lys Ala Leu Asn Glu Ser Leu Ile Asp
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20

25

30

Leu Gln Glu Leu
35

<210> 70
<211> 36
<212> PRT
<213> Artificial

<220>
<223> synthetic peptide

<400> 70

Asp Ile Ala Ala Ile Asn Ala Ser Val Ala Asn Ile Gln Lys Glu Ile
1 5 10 15

Ala Arg Leu Asn Glu Val Ala Lys Ala Leu Asn Glu Ser Leu Ala Ala
20 25 30

Leu Gln Ala Leu
35

<210> 71
<211> 36
<212> PRT
<213> Artificial

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (17)..(21)
<223> relative to residues 1166 to 1170; lactam bridge

<400> 71

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1 5 10 15

Glu Arg Leu Asn Lys Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp
20 25 30

Leu Gln Glu Leu
35

<210> 72
<211> 36
<212> PRT
<213> Artificial

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (17)..(21)

<223> Salt bridge

<400> 72

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1 5 10 15

Glu Arg Leu Asn Lys Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp
20 25 30

Leu Gln Glu Leu
35

<210> 73

<211> 36

<212> PRT

<213> Artificial

<220>

<223> Synthetic peptide

<400> 73

Asp Ile Glu Glu Ile Asn Lys Lys Val Glu Glu Ile Gln Lys Lys Ile
1 5 10 15

Glu Glu Leu Asn Lys Lys Ala Glu Glu Leu Asn Lys Lys Leu Glu Glu
20 25 30

Leu Gln Lys Lys
35

<210> 74

<211> 36

<212> PRT

<213> Artificial

<220>

<223> Synthetic peptide

<220>

<221> MISC_FEATURE

<222> (1)..(36)

<223> Introduction of salt bridges relating to mutations departing from
SEQ ID NO:48 (HR-C4a extended; 1150-1185)

<400> 74

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Glu Ile Gln Lys Lys Ile
1 5 10 15

Glu Glu Leu Asn Lys Lys Ala Glu Glu Leu Asn Lys Lys Leu Ile Asp
20 25 30

Leu Gln Glu Leu
35

<210> 75

<211> 7

<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 75

Ile Gln Glu Ser Leu Thr Thr
1 5

<210> 76
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 76

Thr Ser Thr Ala Leu Gly Lys
1 5

<210> 77
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 77

Leu Gln Asp Val Val Asn Gln
1 5

<210> 78
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 78

Asn Ala Gln Ala Leu Asn Thr
1 5

<210> 79
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 79

Leu Val Lys Gln Leu Ser Ser
1 5

<210> 80

<211> 14
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<400> 80

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
 1 5 10

<210> 81
 <211> 14
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<400> 81

Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln
 1 5 10

<210> 82
 <211> 14
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<400> 82

Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr
 1 5 10

<210> 83
 <211> 14
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<400> 83

Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser
 1 5 10

<210> 84
 <211> 21
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic peptide

<400> 84

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
 1 5 10 15

Asp Val Val Asn Gln
20

<210> 85
<211> 21
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 85

Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala
1 5 10 15

Gln Ala Leu Asn Thr
20

<210> 86
<211> 21
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 86

Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
1 5 10 15

Lys Gln Leu Ser Ser
20

<210> 87
<211> 28
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 87

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
1 5 10 15

Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr
20 25

<210> 88
<211> 28
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 88

Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala
Page 42

1

5

10

15

Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser
20 25

<210> 89
<211> 7
<212> PRT
<213> Artificial

<220>
<223> synthetic peptide

<400> 89

Ile Ser Gly Ile Asn Ala Ser
1 5

<210> 90
<211> 7
<212> PRT
<213> Artificial

<220>
<223> synthetic peptide

<400> 90

Val Val Asn Ile Gln Lys Glu
1 5

<210> 91
<211> 7
<212> PRT
<213> Artificial

<220>
<223> synthetic peptide

<400> 91

Ile Asp Arg Leu Asn Glu Val
1 5

<210> 92
<211> 7
<212> PRT
<213> Artificial

<220>
<223> synthetic peptide

<400> 92

Ala Lys Asn Leu Asn Glu Ser
1 5

<210> 93
<211> 7
<212> PRT
<213> Artificial

<220>

<223> Synthetic peptide

<400> 93

Leu Ile Asp Leu Gln Glu Leu
1 5

<210> 94

<211> 14

<212> PRT

<213> Artificial

<220>

<223> Synthetic peptide

<400> 94

Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu
1 5 10

<210> 95

<211> 14

<212> PRT

<213> Artificial

<220>

<223> Synthetic peptide

<400> 95

Val Val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val
1 5 10

<210> 96

<211> 14

<212> PRT

<213> Artificial

<220>

<223> Synthetic peptide

<400> 96

Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser
1 5 10

<210> 97

<211> 14

<212> PRT

<213> Artificial

<220>

<223> Synthetic peptide

<400> 97

Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu
1 5 10

<210> 98

<211> 21

<212> PRT

<213> Artificial

<220>

<223> synthetic peptide

<400> 98

Ile	Ser	Gly	Ile	Asn	Ala	Ser	Val	Val	Asn	Ile	Gln	Lys	Glu	Ile	Asp
1				5					10					15	

Arg	Leu	Asn	Glu	Val
			20	

<210> 99

<211> 21

<212> PRT

<213> Artificial

<220>

<223> synthetic peptide

<400> 99

Val	Val	Asn	Ile	Gln	Lys	Glu	Ile	Asp	Arg	Leu	Asn	Glu	Val	Ala	Lys
1				5					10					15	

Asn	Leu	Asn	Glu	Ser
			20	

<210> 100

<211> 21

<212> PRT

<213> Artificial

<220>

<223> synthetic peptide

<400> 100

Ile	Asp	Arg	Leu	Asn	Glu	Val	Ala	Lys	Asn	Leu	Asn	Glu	Ser	Leu	Ile
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Asp	Leu	Gln	Glu	Leu
			20	

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<211> 28

<212> PRT

<213> Artificial

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<400> 101

Ile	Ser	Gly	Ile	Asn	Ala	Ser	Val	Val	Asn	Ile	Gln	Lys	Glu	Ile	Asp
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Arg	Leu	Asn	Glu	Val	Ala	Lys	Asn	Leu	Asn	Glu	Ser
			20					25			

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Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu
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